IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

Claims 1-42 (Cancelled).

43. (Currently Amended) A sound coding apparatus comprising:

a first coder that performs weighting on an input signal to mask a spectrum of quantization distortion by a spectral envelope of the input signal, and thereafter encodes the input signal and obtains first coding information;

a decoder that decodes the first coding information outputted from the first coder and obtains a decoded signal;

a computer processor specificator that calculates an auditory masking threshold for a decoded spectrum that is obtained from the decoded signal outputted from the decoder, generates an estimated error spectrum by calculating an the following equation using the decoded spectrum, compares the estimated error spectrum with the auditory masking threshold, and specifies a frequency region in the estimated error spectrum showing an amplitude equal to or greater than the auditory masking threshold;

a subtracter that obtains a residual error signal of the input signal and the decoded signal; and

3

a second coder that encodes the frequency region in the residual error signal outputted from the subtracter specified by the <u>computer processor</u> ~~specificator~~, and obtains second coding information, wherein:

the equation is expressed as:

$$E'(m) = a \cdot P(m)^\gamma$$

where

E'(m) is the estimated error spectrum,

P(m) is the decoded spectrum, and

a and γ are constants of 0 or above and less than 1.

44. (Currently Amended) The sound coding apparatus according to claim 43, wherein:

with respect to the input signal, the first coder encodes a low frequency region; and

with respect to the residual signal, the second coder encodes the frequency region in a low frequency region specified by the <u>computer processor</u> ~~specificator~~, and encodes a predetermined region in a high frequency region.

45. (Previously Presented) The sound coding apparatus according to claim 43, wherein the second coder finds a difference from the auditory masking threshold value every frequency and determines a distribution of encoded bits based on the differences.

46. (Currently Amended) The sound coding apparatus according to claim 43, wherein the <u>computer processor</u> ~~specificator~~ normalizes the auditory masking threshold and specifies a

4

frequency region showing an amplitude equal to or greater than the normalized auditory masking threshold.

47. (Previously Presented) The sound coding apparatus according to claim 43, wherein:

the first coder performs encoding using a code excited linear prediction method; and

the second coder performs encoding using a modified discrete cosine transform method.

48. (Currently Amended) A sound signal decoding apparatus comprising:

a first decoder that decodes first coding information obtained in the sound coding apparatus of claim 43, and obtains a first decoded signal;

a computer processor specificator that calculates an auditory masking threshold for a decoded spectrum that is obtained from the first decoded signal outputted from the first decoder, generates an estimated error spectrum by calculating an the following equation using the decoded spectrum, compares the estimated error spectrum with the auditory masking threshold, and specifies a frequency region in the estimated error spectrum showing an amplitude equal to or greater than the auditory masking threshold;

a second decoder that decodes the frequency region in second coding information obtained in the sound coding apparatus of claim 43 specified by the computer processor specificator, and obtains a second decoded signal; and

an adder that adds the first decoded signal outputted from the first decoder and the second decoded signal outputted from the second decoder and obtains a sound signal, wherein:

the equation is expressed as:

5

$$E'(m) = a \cdot P(m)^{\gamma}$$

where

E'(m) is the estimated error spectrum,

P(m) is the decoded spectrum, and

a and γ are constants of 0 or above and less than 1.

49. (Currently Amended) The sound decoding apparatus according to claim 48, wherein:

the first decoder decodes the first coding information and obtains the decoded signal of a low frequency region; and

with respect to the second coding information, in the low frequency region, the second decoder decodes the frequency region specified by the computer processor specificator, and decodes a predetermined frequency region in a high frequency region.

50. (Previously Presented) The sound decoding apparatus according to claim 48, wherein the second decoder finds a difference from the auditory masking threshold value every frequency and determines a distribution of encoded bits based on the differences.

51. (Currently Amended) The sound decoding apparatus according to claim 48, wherein the computer processor specificator normalizes the auditory masking threshold and specifies a frequency region showing an amplitude equal to or greater than the normalized auditory masking threshold.

52. (Previously Presented) The sound decoding apparatus according to claim 48, wherein:

the first decoder performs decoding using a code excited linear prediction method; and

the second decoder performs decoding using an inverse modified discrete cosine transform method.

53. (Previously Presented) A communication terminal apparatus comprising one of the sound coding apparatus of claim 43 and the sound decoding apparatus of claim 48.

54. (Previously Presented) A base station apparatus comprising one of the sound coding apparatus of claim 43 and the sound decoding apparatus of claim 48.

55. (Currently Amended) A sound coding method comprising:

a first coding step, in a first coder, of performing weighting on an input signal to mask a spectrum of quantization distortion by a spectral envelope of the input signal, and thereafter encoding the input signal and obtaining first coding information;

a decoding step, in a decoder, of decoding the first coding information and obtaining a decoded signal;

a specifying step, in a specificator, of calculating an auditory masking threshold for a decoded spectrum that is obtained from the decoded signal, generating an estimated error spectrum by calculating an the following equation using the decoded spectrum, comparing the estimated error spectrum with the auditory masking threshold, and specifying a frequency region

7

in the estimated error spectrum showing an amplitude equal to or greater than the auditory

masking threshold;

a subtracting step, in a subtracter, of obtaining a residual error signal of the input signal

and the decoded signal; and

a second coding step, in a second coder, of encoding the frequency region in the residual

error signal specified in the specifying step, and obtaining second coding information, wherein:

the equation is expressed as:

$$E'(m) = a \cdot P(m)^{\gamma}$$

where

E'(m) is the estimated error spectrum,

P(m) is the decoded spectrum, and

a and γ are constants of 0 or above and less than 1.

56. (Currently Amended) A sound decoding method comprising:

a first decoding step, in a first decoder, of decoding first coding information obtained by

the sound coding method of claim 55, and obtaining a first decoded signal;

a specifying step, in a specificator, of calculating an auditory masking threshold for a

decoded spectrum that is obtained from the first decoded signal, generating an estimated error

spectrum by calculating an ~~the following~~ equation using the decoded spectrum, comparing the

estimated error spectrum with the auditory masking threshold, and specifying a frequency region

in the estimated error spectrum showing an amplitude equal to or greater than the auditory

masking threshold;

8

a second decoding step, in a second decoder, of decoding the frequency region in second coding information obtained by the sound coding method of claim 55 specified in the specifying step, and obtaining a second decoded signal; and

an adding step, in an adder, of adding the first decoded signal and the second decoded signal and obtaining a sound signal, wherein:

the equation is expressed as:

$$E'(m) = a \cdot P(m)^{\gamma}$$

where

E'(m) is the estimated error spectrum,

P(m) is the decoded spectrum, and

a and γ are constants of 0 or above and less than 1.